Appl. No. 09/896,228
Amendment under 37 C.F.R. 1.111
Reply to Office Action of September 7, 2006

Attorney Ref. No. 82722

REMARKS

Claims 1-54 are pending in this application. By this amendment, claims 1 and 27 have been amended. Reconsideration and withdrawal of the rejections set forth in the Office Action dated February 8, 2006, is respectfully requested in view of this amendment.

The amendments describe the host routing application copies corresponding to plural independent processes, but sharing said common operating system, and plural virtual router domains established by the independent processes and logically partitioned within said host router. Support is found in the original specification, including at Standard Paragraphs [0003], [0005], [0013] and [0016]. It is respectfully submitted that the above amendments introduce no new matter within the meaning of 35 U.S.C. §132.

Objections to the Specification

In the outstanding Office Action, the Examiner requested that applicant update status information of the related applications. Since the related application is not related by virtue of continuation practice, there is no associated "Cross Reference to Related Applications" or "Continuing Data" section.

It is noted that in the PAIR rendition of the application, the "Related Applications" and "Technical Field" sections are absent. The "Technical Field" section is inserted by this amendment. The reference to the 09/703,057 case appears in Standard Paragraph [0008], and is believed sufficient.

Applicants' representative does not have access to the 09/703,057 case either as a physical

files or on PAIR. Therefore, Applicants' representative solicits the Examiner's help in identifying

the status of this case.

Request for PAIR Access to Related Case

It is noted that the 09/703,057 case is incorporated by reference in Standard Paragraph

[0008]. It is therefore requested that the 09/703,057 case be made available for inspection on

PAIR by anyone with access to the present case. Under 37 CFR 1.14 (a)(1)(iv) and (v), if the

09/703,057 case is abandoned (or pending), it may be made available to the public if the

application is identified in a U.S. patent. It is believed that these sections of

37 CFR 1.14 (a)(1)(iv) and (v) also apply to persons with access to the referencing document

(which is the present application).

Rejections Under 35 U.S.C. §103

In the outstanding Office Action, the Examiner rejected claims under 35 U.S.C. §103(a)

as unpatentable over the basic reference of the *Rao* U.S. Patent No. 6,674,756 taken in view of

Jourdenais, et al., U.S. Patent No. 5,278,986 (hereinafter *Jourdenais*) .

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Response

This rejection, as applied to the amended claims, is respectfully traversed.   The invention

as claimed in claim 1 specifies:

> "... a host router running a common operating system and a master control
> processor ... having a capability of running plural independent processes and
> routing application copies corresponding to the independent processes, but sharing
> said common operating system ... virtual router domains established by ...
> independent processes, the virtual router domains logically partitioned within
> [the] host router, each ... process running in a ... virtual router domain
> independently of all other ... virtual router domains on top of said common
> operating system ... ."

Claim 27 specifies:

> A method of logically partitioning a host router into virtual router domains,
> comprising configuring the kernel of a single common operating system running
> in said host router [and independent processes] and application [copies]
> corresponding to the independent process to run on said host router, in a manner
> to permit running a plurality of said independent processes and routing application
> copies corresponding to the independent processes, but sharing said common
> operating system ... a plurality of virtual router domains established by ones of
> said independent processes within said host router ... generating an independent
> identical set of replica arrays of global variables for each [of a plurality of] virtual
> router domain; and associating a process with each said virtual router domain of
> said host router, such that said processes run in said virtual router domains
> independently of one another on top of said single common operating system of
> said host router using a master control processor.

There is no suggestion in the prior art of record that a host router use a common operating

system, but run separate independent processes for routing application copies corresponding to

the independent processes. Specifically, *Rao* describes multiple virtual routers but fails to

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suggest separate processing resources. Instead, *Rao* uses distributed processing. See *Rao* at

col. 10, lines 32-58.

Rao further does not suggest operation analogous to Applicants' claimed multiple

independent processes. There is no suggestion of multiple parallel processes of that type running

under a common kernel; no separate programming space; no separate threads. This is because

Rao specifically runs the multiple virtual routers under a single process.

Rao's description of the multiple routers is on Column 19, lines 26, et seq. *Rao* uses

separate IP protocol stacks and routing tables, as described at col. 20, lines 4-6. There is no

suggestion that this be performed by separate threads. Separate virtual private network (VPN)

sessions are specified as separately <u>and sequentially</u> addressed by the same process, at col. 20,

lines 24-31. In particular, *Rao* states:

> "For example, session 1 is compared first, then session 2, and so on. If a packet
> does not match one of the sessions, it proceeds through the list to the next
> session." (Col. 20, lines 29-31.)

It is noted that the above clearly "teaches away from" Applicants' claimed features of

> "... configuring at least one independent process and application copy
> corresponding to the independent process to run on said host router, in a manner
> to permit running a plurality of said independent processes and routing application
> copies corresponding to the independent processes, but sharing said common
> operating system ... ." (Claim 1.)

In particular, one cannot "permit running a plurality of ... independent processes and

routing application copies corresponding to the independent processes" and at the same time

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sequentially thread the multiple processes on the same thread. (Maybe this can be accomplished

on Windows, but that isn't the invention either!)

As in the prior action, *Jourdenais* is used to show scalable variables stored in an array;

however *Jourdenais* fails to suggest the common operating system and master control processor

combination. Therefore *Jourdenais* cannot be used to suggest using the variables stored in an

array in the implementation of a common operating system running plural processes for

providing the multiple VPNs under a master control processor.

As previously pointed out, the common operating system in combination with the master

control processor is significant because the prior art fails to suggest doing this while using a

common operating system. As applied to the amended claims, the prior art fails to suggest doing

this with multiple independent processes.

Rejections of Dependent Claims

The remaining claims depend directly or ultimately from independent claims 1 or 27, and

are also patentable for the reasons set forth above with respect to those claims. In this regard,

there are particular features which, in combination with the features of independent claims 1 or

27, set forth an environment in which multiple VPNs operate under separate processes, under a

common operating system. For example claims 11 and 37 describe:

> "... [plural] interfaces partitioned interchangeably among said virtual router
> domains, ... [and] associated with only one such virtual router domain at one time,
> but can be repartitioned among said virtual router domains to reconfigure said
> host router." (Claim 11.)

This sets forth an operation which cannot occur by the use of any combination presented by the prior art of record. This is made clear by the rejection as set forth in Section 20 of the outstanding Office Action, in which *Rao* is described as, "associating only one such virtual router domain at one time but can be repartitioned among virtual router domains to reconfigure said host router." The present invention can repartition but can operate multiple virtual router domains at one time. This is clear from Applicants' Figure, as well as independent claims 1 and 27.

Applicants further refer to the arguments relating to the dependent claims, as set forth in the Response submitted June 8, 2006.

Accordingly, it is respectfully requested that the Examiner withdraw the obviousness rejections under 35 U.S.C. §103(a).

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CONCLUSION

In light of the foregoing, Applicants submit that the application is in condition for

allowance. Applicant respectfully request that the Examiner withdraw the rejections and the case

be passed to issuance. If the Examiner believes the application is not in condition for allowance,

Applicants respectfully request that the Examiner call the undersigned.

Respectfully submitted,

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